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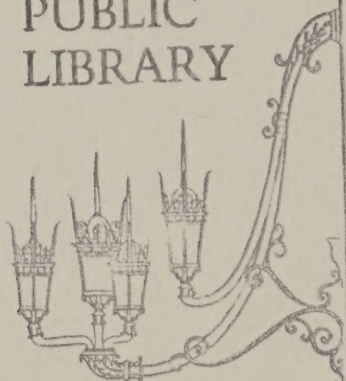
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GROWTH AND CHANGE IN EARNED INCOME  
OVER FIVE DECADES, 1929-1980,  
BOSTON AND TWELVE OF THE NATION'S LARGE CITIES

Frank J. Kay

Boston Redevelopment Authority  
Research Department

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Kevin H. White, Mayor  
City of Boston

Robert J. Ryan, Director  
Boston Redevelopment Authority

Alexander Ganz, Director  
Research Department

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## I. Introduction

Boston's economy experienced a transformation between the years 1929-1980. Present day Boston is a flexible economic community, capable of withstanding frequent downturns in the national economy, exogenous shocks and an assortment of political policy changes at the national level.

The changes in Boston's economy were remarkable. In 1929, Boston relied heavily on its trade and manufacturing sectors to supply a combined 51.4 percent of its earned income. The sensitivity of these two sectors to economic downturns placed Boston in a precarious position. Gradually, the City's economy became more diverse. The heavy reliance on trade and manufacturing subsided with a subsequent emergence of services, government and finance as dominant sectors in the City. By the year 1980, Boston had developed a well-earned reputation as a center for health, education, government services and banking while maintaining respect as a national and international trading port and a regional manufacturing center. The City also maintained an international airport, a city-wide transportation system and newly constructed buildings serving both the public and private sector. This broad base of economic activity allowed the City to absorb crisis or change in any one sector without undermining the overall economy.

The intent of this study is to compare Boston with twelve other large cities in the United States in terms of changes in economic structure and long-term trends over five decades. While such long-term observations do not suggest specific development policy, an understanding of the past strengthens the basis for current policy and planning. This study is a segment of a larger comparative study of the





1. Manufacturing - Factories, mills.
2. Transportation and Utilities - Trucking, air transport, communication.
3. Trade - Durable, non-durable, general merchandise, eating and drinking; wholesale and retail.
4. Finance - Banking, real estate, insurance, security, commodity services.
5. Government - Federal, state, local government and government enterprise.
6. Services - Health, hotels, personal services, education, legal, amusement, recreation, business services, social services, automobile repair.
7. Construction and Other - Mining, contract construction.

The "Construction and Other" sector is a combination of construction, mining, and agriculture services which includes fishing.<sup>1</sup> These non-farm sectors were tabulated by thousands of dollars in each listed city and corresponding county. The following tables and analysis deal with the tabulation of earned income distribution by sector and earned income by sector in constant dollars. As defined by the Bureau of Economic Analysis, earned income is comprised of wage and salary disbursements, other labor income and proprietors' income.<sup>2</sup> Earned income excludes net rental income, royalties, dividends, interest, including both government and private sector transfer payments (i.e., unemployment benefits, social security payments, welfare and relief payments, etc.).

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<sup>1</sup> Includes wages and salaries of U.S. residents working for international organizations in the United States.

<sup>2</sup> The margin of error cannot be accurately estimated due to varying estimating techniques.





Table 1A

PERCENT DISTRIBUTION OF EARNED INCOME AND EMPLOYMENT, BY SECTOR  
BOSTON, 1980

<u>Sectors</u>	<u>Percent Distribution Based on Earned Income</u>	<u>Percent Distribution Based on Employment<sup>1</sup></u>
Manufacturing	10.9%	9.9%
Transportation & Public Utilities	10.7	6.8
Trade (Wholesale & Retail)	13.1	16.3
Finance, Insurance & Real Estate	14.8	12.8
Services	29.3	34.3
Government	18.6	18.0
Construction & Other	2.6	2.1

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<sup>1</sup> Jeffrey Brown, Boston Redevelopment Authority, "Boston and Fourteen Large Cities, Economic Structure and Trends, 1969-1980," 1982.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 1981.





government sector gained a larger share of earned income in all thirteen cities and the United States.

The cities that comprise the industrial division--Chicago, Cleveland, Philadelphia, and St. Louis--were experiencing the same trend. That is, manufacturing declined in importance while the urban economies became somewhat more diversified. These particular cities, still heavily dependent on manufacturing and trade, are usually the first to feel a downward trend in the economy.

Three of the Sunbelt cities--Houston, Los Angeles and Phoenix--had manufacturing and government sectors that grew in importance over the fifty years. Only New Orleans became less dependent on manufacturing. At the same time, both the transportation and trade sectors declined in importance while the remaining sectors showed mixed changes.

Tables 2, 3, and 4 present earned income by sector in constant (1980) dollars. In terms of real growth, almost all cities in all sectors expanded. The exceptions to this were: Boston, down in trade (-21 percent) and construction (-21 percent); St. Louis, off in trade (-23 percent); Philadelphia, down in construction (-25 percent); and New York, off in construction (-21 percent).<sup>1</sup> All four of these cities are older communities with mature local economies. Furthermore, these cities are geographically confined within larger metropolitan areas. Over the fifty years, much economic activity dispersed beyond the borders of these cities. In comparison, geographically large cities such as Houston, Phoenix, Denver and Los Angeles have experienced much economic expansion within their boundaries.





TABLE 3

EARNED INCOME BY SECTOR IN CONSTANT DOLLARS (1980)  
BOSTON, TWELVE LARGE CITIES, AND THE UNITED STATES  
SELECTED YEARS 1929-1980

	TRADE			FINANCE			SERVICES				
	1980	%	CHANGE	1929	1980	%	CHANGE	1929	1980	%	CHANGE
UNITED STATES	67,212,860		289.6	20,682,680	92,865,000		349.0	46,368,640	281,448,900		507.0
BOSTON	1,595,832		- 21.8	512,569	1,410,267		175.1	693,370	2,792,264		302.7
SUNBELT											
HOUSTON	339,693		1497.7	77,696	1,740,068		2139.6	169,223	5,020,465		2866.8
LOS ANGELES	1,813,168		599.2	870,046	5,240,580		502.3	1,936,950	16,243,820		738.6
NEW ORLEANS	345,390		189.9	130,042	434,339		234.0	241,109	1,223,916		407.6
PHOENIX	107,674		1833.3	25,198	863,938		3328.7	62,021	2,098,059		3282.8
INDUSTRIAL											
CHICAGO	5,134,935		87.4	1,602,639	4,511,855		181.5	2,902,317	9,459,883		225.9
CLEVELAND	1,156,638		126.3	274,577	815,309		196.9	705,240	2,682,452		280.4
PHILADELPHIA	1,615,219		31.8	768,903	1,321,461		71.9	796,697	3,411,389		328.2
ST. LOUIS	1,247,543		- 25.1	273,379	459,720		68.2	461,394	1,380,511		199.2
BROAD-BASED SERVICES											
DENVER	376,067		295.7	113,143	761,476		573.0	182,594	1,633,751		794.7
NEW YORK	7,674,839		41.9	4,470,654	10,664,570		138.5	5,311,247	17,214,750		224.1
SAN FRANCISCO	1,208,302		57.1	373,140	1,888,153		406.0	601,837	2,754,091		357.7
WASHINGTON D.C.	433,410		98.1	120,275	694,565		477.5	580,092	3,753,334		547.0
TOTAL 13 CITIES	23,048,680		129.5	9,612,256	30,806,270		220.5	14,644,080	69,669,390		375.8
PERCENT OF U.S.A	34.3		20.2	46.5	33.2			31.6	24.8		

\*\*TRADE=WHOLESALE TRADE + RETAIL TRADE (COMBINED IN 1929 B.E.A. DATA.)

SOURCE: U.S. DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS.



Overall, national economic activity expanded tremendously between the years 1929-1980. Philadelphia, Boston, Chicago, St. Louis, Cleveland and New York, experienced moderate expansion of total non-farm earned income in the range of one to 200 percent. On the other hand, Houston, Phoenix, Denver and Los Angeles, experienced tremendous expansion in the fifty-year period. The most dynamic growth occurred in Phoenix. Every industrial sector within the city of Phoenix multiplied its growth rate many times over. The manufacturing sector grew to seventy times its size in 1929. The same growth rate was experienced throughout the remaining sectors: transportation and utilities multiplied 23 times, trade multiplied 18 times, finance 31 times, services 29 times, government 31 times and construction 43 times. Houston also experienced tremendous growth, expanding its economy nineteen times over its size in 1929. Growth in

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<sup>1</sup> See Edwin J. Coleman and Jeanne S. Goodman, Local Area Personal Income 1970-1975; (BEA-REM 77-03, U.S. Department of Commerce, Bureau of Economic Analysis, August 1977), p.7; "In the contract construction industry, point of disbursement may or may not be the actual work site. Therefore, the wage and salary estimates for the construction industry do not necessarily reflect the county of work. This is the only industry where this distinction is of importance."





federal government, despite massive social programs carried out since 1929. A great deal of growth in this sector can be attributed to massive development in city infrastructure across the country. Thus, much growth has occurred at the state and local level.<sup>1</sup>

A shift from the manufacturing to the service sector in the United States as a whole is also highlighted in tables 2, 3, and 4. This shift in earned income was not characterized by a declining manufacturing sector. As Table 2 indicates, the manufacturing sector for the U.S. as a whole increased over four times its size since 1929. The shift was generated by a rapidly growing service sector which simply outdistanced the manufacturing sector in growth of earned income. The service sector in the United States, as Table 3 displays, increased its share of earned income sixfold.

Boston's development in services was much more pronounced. Boston's services sector grew at a rate of 303 percent compared to a four percent increase in manufacturing. The shift to a generally low-wage services sector from a traditionally higher-wage manufacturing sector may have lowered the potential income of some of Boston's workers. However, an analysis of the effects of these changes on personal income of Boston residents is beyond the scope of this report. What remained clear in Boston was the need for services and other sectors to take up the slack from declines in manufacturing and trade to expand overall employment in the City.

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<sup>1</sup> See Michael Urquhart, "The Services Industry: Is It Recession Proof?" (Monthly Labor Review, October 1982, pp. 19-25.





#### IV. Outlook for the 80s

The outlook for Boston in the 80s remains promising. However, problems will arise that could hinder the City and its development. These difficulties will require attention from both the public and private sectors of the economy: 1) the unemployed labor force within the City must be combined with any available jobs that emerge from an expanding high technology industry; 2) the student population and its role in Boston's economy should be given careful attention; 3) public policy concessions toward the high technology industry should be encouraged, but not depended upon to produce a long-run, major source of earned income; and 4) manufacturing development should not be ignored within the City limits.

1) Unemployed Labor Force: The benefits that Boston enjoys by having the high technology industry in proximity are limited. Actual high technology production within the City limits is minimal. However, the City does benefit from businesses that provide goods and services for the high technology industry. These services generally tend to produce jobs for City residents. Yet, many people still remain unemployed and in need of the good jobs that high technology could provide.

2) Student Population: The many colleges and universities in the Boston area have a combined enrollment of 250,000 students. The number of students enrolled within the City limits totals some 160,000. Although they are not all residents, students represent a substantial part of Boston's population of 562,994 as of 1980. These students quite often acquire jobs within Boston's growing services industry. They also provide demand for other goods and services which supports many more



businesses. Manufacturing traditionally offers higher wage scales and entry-level jobs with advancement opportunity. These new benefits to inner-city residents could raise their standard of living. Presently one of the City's major providers of earned income is the services industry. However, the services industry generally offers wages that conform with the lower pay scales. The growing services industry thus encourages a growing disparity between workers on the higher and lower levels of the wage scale. This results in city residents who cannot afford to own property and higher paid workers who commute into the city. Economically, this means the city has a diminishing tax base and that higher-paid workers pay taxes elsewhere.

These will not be the only problems facing Boston in the 1980s. Regardless of other difficulties, Boston cannot afford to ignore the long-term implications of unemployment, high technology development policy, decline in student enrollment and manufacturing development within the City.





- D) A calculation for percentage change for 13 cities by city by sector, expressed as:

$$\frac{\text{Earned Income by City by Sector 1980-}}{\text{Earned Income by City by Sector 1929}} \times 100 = \frac{\text{Percentage Change for 13 Cities by City by Sector}}{\text{Sector}}$$

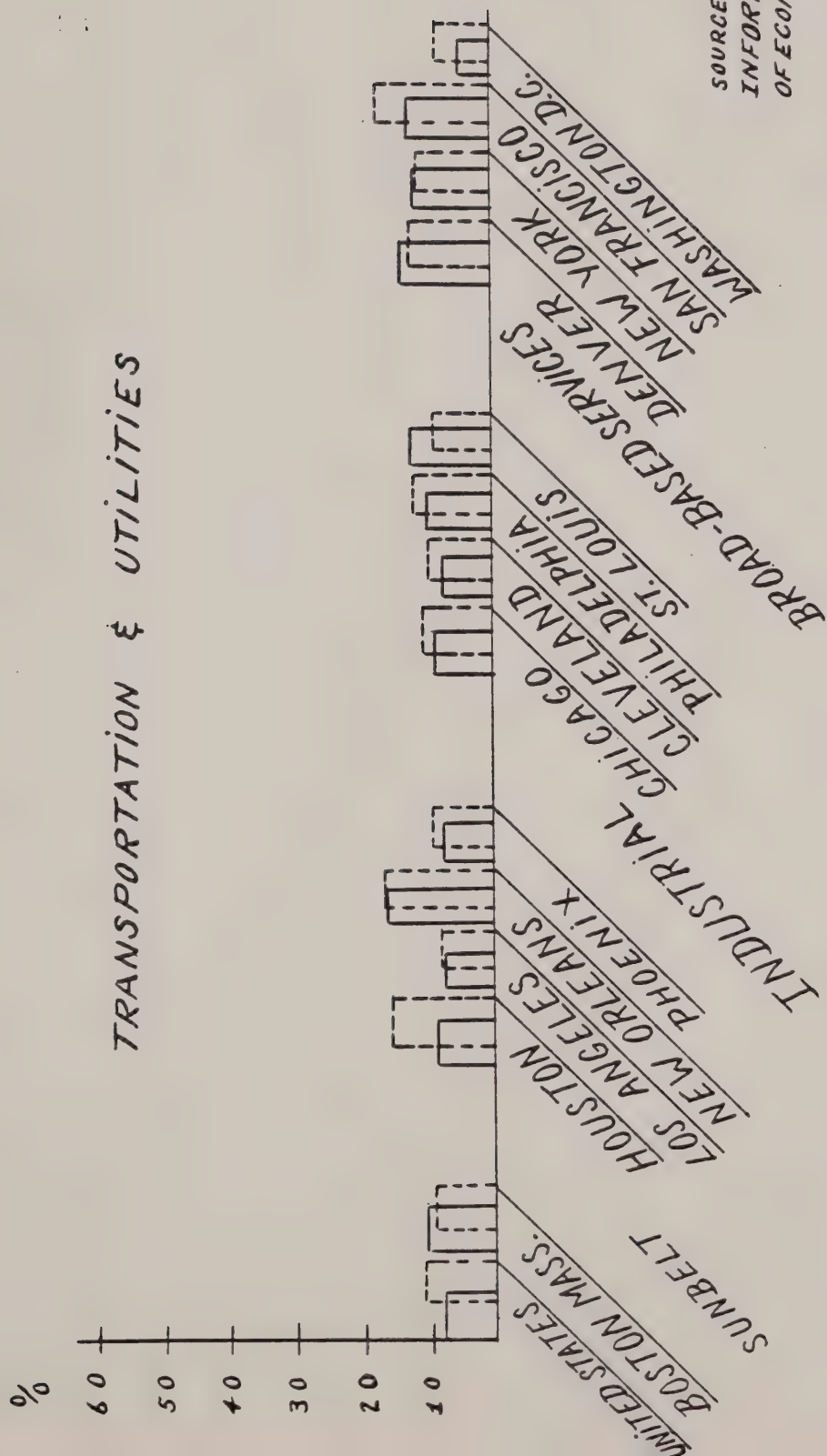
- E) A calculation for percentage change for total 13 cities by sector, expressed as:

$$\frac{\text{Total 13 Cities by Sector 1980-}}{\text{Total 13 Cities by Sector 1929}} \times 100 = \frac{\text{Percentage Change for Total 13 Cities by Sector}}{\text{13 Cities by Sector}}$$





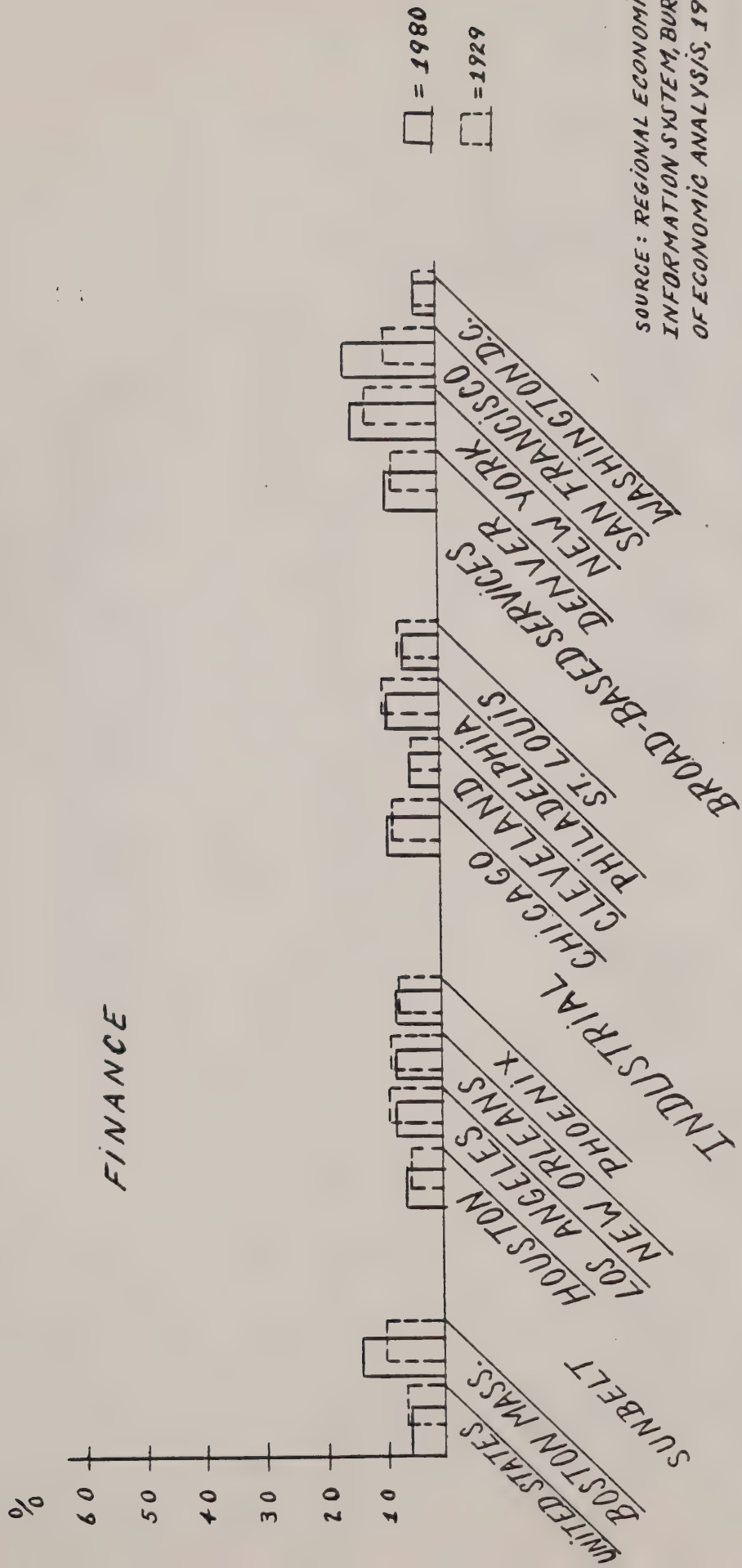
PERCENT DISTRIBUTION OF EARNED INCOME  
 BY SECTOR, BOSTON, TWELVE LARGE CITIES, AND THE  
 UNITED STATES, SELECTED YEARS 1929-1980  
 FIGURE 2



SOURCE: REGIONAL ECONOMIC  
 INFORMATION SYSTEM, BUREAU  
 OF ECONOMIC ANALYSIS, 1981



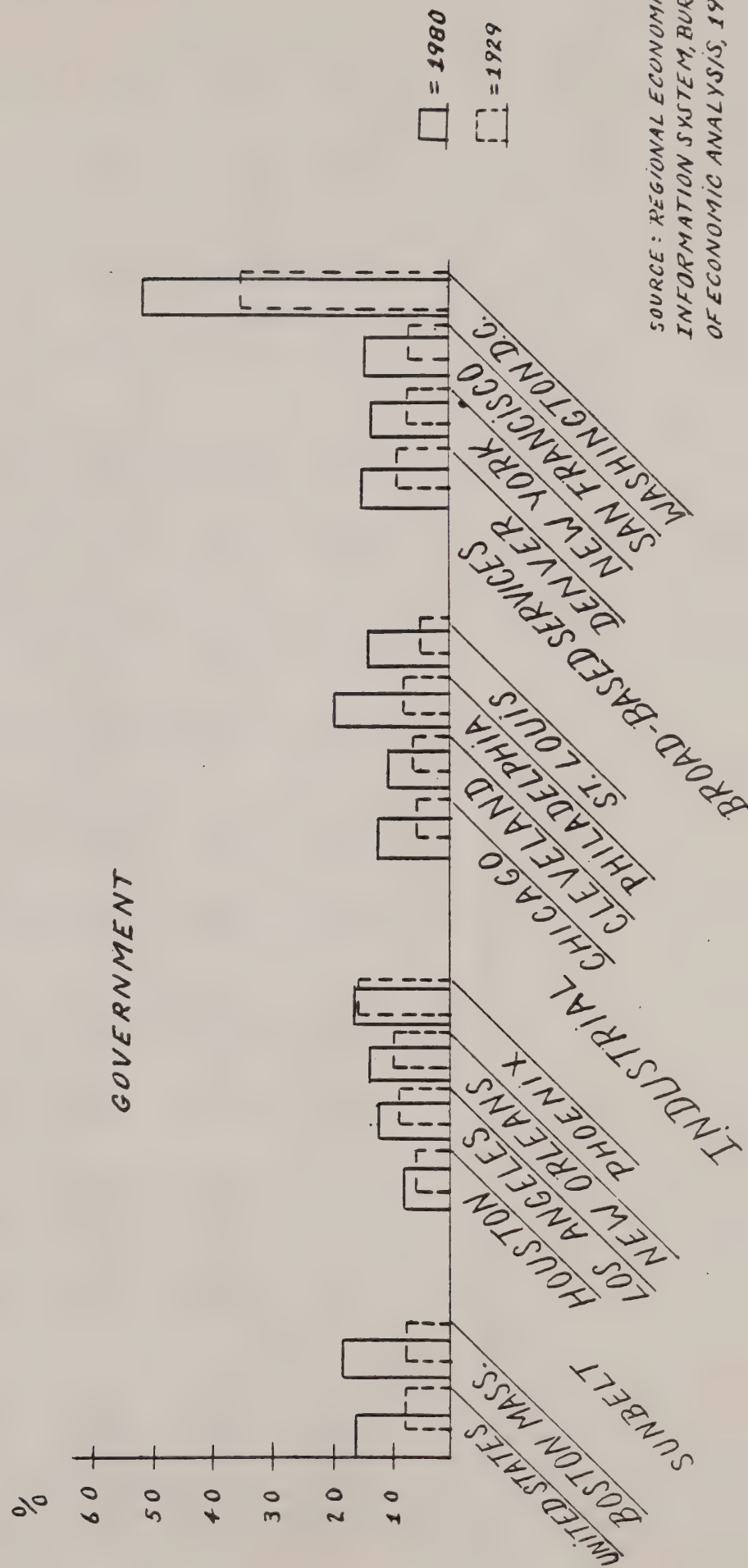
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 FIGURE 4







PERCENT DISTRIBUTION OF EARNED INCOME  
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 UNITED STATES, SELECTED YEARS 1929-1980  
 FIGURE 6



SOURCE: REGIONAL ECONOMIC  
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TABLE 1  
PERCENT DISTRIBUTION OF EARNED INCOME BY SECTOR  
BOSTON, TWELVE LARGE CITIES, AND THE UNITED STATES  
SELECTED YEARS 1929-1980

	MANUFACTURING		TRAN. & UTIL.		TRADE		FINANCE		SERVICES		GOVERNMENT		CONST. & OTHER	
	1929	1980	1929	1980	1929	1980	1929	1980	1929	1980	1929	1980	1929	1980
UNITED STATES	28.7	26.4	11.3	7.9	21.2	16.7	6.5	5.9	14.6	18.0	8.3	16.8	9.3	8.3
BOSTON	19.8	10.9	10.2	10.7	31.6	13.1	10.2	14.8	13.7	29.3	8.1	18.6	6.4	2.7
SUNBELT														
HOUSTON	15.6	18.9	16.6	8.6	26.0	19.8	5.9	6.4	13.0	18.3	6.2	7.9	16.8	20.1
LOS ANGELES	19.4	27.3	7.6	7.4	20.8	17.8	10.0	7.4	22.3	22.9	9.4	12.0	10.5	5.2
NEW ORLEANS	17.4	9.0	17.1	16.5	24.7	17.6	9.3	7.6	17.3	21.5	10.1	15.3	4.1	12.5
PHOENIX	9.0	21.6	9.1	7.1	31.9	19.0	7.5	7.9	18.4	19.2	15.7	14.6	8.5	10.7
INDUSTRIAL														
CHICAGO	29.7	27.9	10.4	8.7	24.8	18.9	7.7	8.9	14.0	18.6	6.1	11.6	7.3	5.4
CLEVELAND	38.1	35.4	8.9	7.8	21.2	17.7	5.0	5.5	12.9	18.1	6.5	10.3	7.4	5.2
PHILADELPHIA	32.3	19.0	11.9	10.0	20.3	15.0	9.7	9.3	10.0	24.1	7.7	19.2	8.2	3.5
ST. LOUIS	30.5	28.2	9.3	12.7	30.7	14.3	6.7	6.9	11.3	20.6	6.1	13.8	5.5	3.5
BROAD-BASED SERVICES														
DENVER	17.7	13.1	12.6	13.8	28.8	18.2	8.7	9.3	14.0	20.0	9.3	15.4	9.1	10.3
NEW YORK**	25.9	14.4	10.9	11.2	21.7	16.3	12.6	15.9	15.0	25.7	7.0	13.5	6.9	2.9
SAN FRANCISCO	15.4	9.8	17.8	12.4	30.2	16.1	9.3	16.1	15.0	23.4	7.1	16.0	5.2	6.2
WASHINGTON, DC.	5.3	2.9	9.1	5.3	16.9	6.3	4.7	5.1	22.6	27.7	35.9	50.0	5.6	2.6

\*TRADE = WHOLESALE TRADE + RETAIL TRADE (COMBINED IN 1929 B.E.A. DATA).

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SOURCE: U.S. DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS.













